

BOOK REVIEWS

Pleistocene Mollusca of Ohio. *Aurèle La Rocque.* Ohio Division of Geological Survey, Fountain Square, Columbus, Ohio 43224. Bulletin 62: Part 1—1966, 111 p., 2 figs.; Part 2—1967, p. 113–356, 206 figs., 8 pls.; Part 3—1968, p. 357–553, 208 figs., 6 pls.; Part 4—1970, p. 555–800, 216 figs., 4 pls. \$2.50+25¢ mailing charge and 10¢ tax for each part.

This is the final volume of Dr. Aurèle La Rocque's monumental *Pleistocene Mollusca of Ohio*, Bulletin 62 of the Ohio Division of Geological Survey. This magnificent four-volume contribution, very much like but more up to date than Baker's two-volume work on the modern Mollusca of Wisconsin, presents a systematic survey of all the Pleistocene molluscs of Ohio, presenting concisely all essential information on each organism, both in terms of it as a Pleistocene fossil and as a modern, living animal. Data provided for each species are: synonymy, type locality, brief description (with line drawings from older sources in almost every case), ecology, distribution both in North America and in Ohio (supported by distribution maps of both areas), and geologic range. This systematic survey composes the final three volumes, of which Part 2 presents the pelecypods, Part 3 the freshwater gastropods, and Part 4 the terrestrial gastropods. Numbering of pages and of illustrations is continuous throughout all four parts.

Part 1 contains introductory material, including collecting methods, a brief summary of the Pleistocene history of Ohio, and an impressive compilation of representative molluscan assemblages. These assemblages come from sites throughout North America and represent Pliocene (4 assemblages), Pleistocene (129 assemblages, arranged by glacial and interglacials), and 144 living or modern assemblages. As an introduction to these lists, there are several pages, under the chapter title of *Paleoecology*, in which Dr. La Rocque reveals the basic assumptions and limitations which he feels are critical to a sound understanding of these and any meaningful molluscan assemblages. This perceptive discussion, from a competent professional of Dr. La Rocque's stature, is a particularly valuable contribution, for it represents a published record of the thinking of this famous Pleistocene malacologist in regard to the significance and limitations of ecological interpretations drawn from Pleistocene molluscan assemblages.

This set of volumes should be in the private library of everyone concerned with the Pleistocene or with freshwater and terrestrial molluscs. They will be of value to geologists, paleontologists, zoologists, and ecologists, and any others interested in the invertebrate life either of the Ice Ages or of today.

JANE L. FORSYTH

One Thousand American Fungi. Toadstools, Mushrooms, Fungi: How to Select and Cook the Edible; How to Distinguish and Avoid the Poisonous. *Charles McIlvaine and Robert K. Macadam.* With a new essay on nomenclatural changes by *Robert L. Shaffer.* (Reprint of second revised edition of 1902 with new essay.) Dover Publications, New York, 1973. Paperback, lxii+729 p. \$6.50.

Classics are always worth having in print, especially when they are of current interest. Thus the reprinting in facsimile of McIlvaine and Macadam's mushroom book should be a welcome event for mushroom collectors. This is the "grandfather" of all American amateur mushroom books and it contains much still-useful information, with good descriptions of a large number of fungi, over one thousand in this revised edition of 1902. The volume has information about identification, edibility (together with recipes), distribution, home growing of mushrooms, and mushroom poisoning. McIlvaine is notorious for having eaten every mushroom that was not deadly poisonous, in many cases doing so by eating a little each day until he could manage a larger portion without upset. There is no modern popular book with so much chatty information, and serious students will want to read it. A copy should be in libraries, provided recent authoritative works, such as Orson K. Miller's *Mushrooms of North America* (1972), are there too. There is bound to be confusion about this reprint because The Something Else Press, West Glover, Vermont, has reprinted the same edition in the same year. Their facsimile is large sized and has slightly larger pages and type than the original, whereas the Dover facsimile has much reduced pages, but the same size type as the original. More important is that the Dover edition added a chapter by Dr. Robert L. Shaffer on nomenclatural changes, making it possible to update the names. The Dover edition reproduces the plates in color, even though the original colors were not too satisfactory; the plates are black and white in the other publisher's edition. Both editions leave uncolored the tabular view of genera by spore color. The paperbound copies of both publishers are the same price; the hardbound copy is available only from The Something Else Press. I vote for buying the Dover edition because of the nomenclatural chapter and the colored plates. It is a good buy for mushroom hunters.

EMANUEL D. RUDOLPH

Manual of the Southeastern Flora. John Kunkel Small. Hafner Publishing Company, New York. 1972 (facsimile of 1933 edition). 2 volumes, xxii+1554 p. \$25.00.

Small's *Manual of the Southeastern Flora*, published in 1933 and out of print for several years, is now available in facsimile form. The *Manual* includes all of the phanerogams that were known to have occurred in southeastern United States at that time. It also contains a brief history of botanical exploration in southeastern United States and a summary of the phytogeographical regions of the area. Keys are included for 58 orders, 233 families, 1518 genera, and 5537 species. Given for each species are a morphological description, the habitat and physiographic provinces in which the species occurs, the general distribution, and, in some cases, the flowering times. Every genus, and for large genera, every species, is illustrated with a line drawing of the flower. In many cases this drawing is supplemented by a sketch of the habit or the fruit. After the taxonomic section, a seven-page list of the genera and species named in the *Manual*, together with the type specimen for each new taxon and its location, is presented.

This facsimile edition is bound in two volumes of approximately 800 pages each, in contrast to the earlier edition, which was bound in a single bulky volume. As a result of this change, this classical work is now available in a more durable and usable form. The binding is good, the printing is sharp, and the paper is very white and flexible.

Since the date of its publication, Small's *Manual* has been the only recent flora to cover the entire southeastern United States. For Alabama, Georgia, Louisiana, Mississippi, and Tennessee, this is the only available floristic survey. It is, therefore, a "must" for those interested in the flora of that region. Another important use of the *Manual* is as a source of names that are not in current use by taxonomists.

Three major drawbacks of the *Manual* exist. First, Dr. Small was an adherent of the American Code of Nomenclature. Therefore, the names he used are often not the currently accepted ones. Second, he oftentimes was an ardent "splitter," recognizing an extraordinary number of species. As an extreme example, he accepted approximately 80 species of *Iris* from a large population on the Mississippi River delta, a population which Anderson (1949, *Introgressive Hybridization*, Wiley) later demonstrated to be actually a hybrid swarm formed by introgressive hybridization of only two species. Third, nearly 40 years have passed since the *Manual* was published. During this time, a great deal of knowledge about the southeastern flora has accumulated.

Two additional floras of the area are currently being compiled. First, Carroll Wood's *Generic Flora of the Southeastern United States*, published in the *Journal of the Arnold Arboretum*, is more than one-half finished and should be completed in a few years. However, this flora mainly treats the classification and nomenclature of the families and genera, and does not, for the most part, have keys for the species. Second, forthcoming from the University of North Carolina, is Albert Radford's *Flora of the Southeastern United States*, which is scheduled for completion by 1976. This will be a standard manual with keys down to infraspecific taxa, and prepared by 40 collaborators.

The facsimile of Small's *Manual* will probably be welcomed by all serious students of the southeastern flora and by the historically inclined botanist. However, with the possibility of a more recent flora becoming available, few botanists interested in general floristics will find this facsimile useful, and students will find the price excessive.

ROBERT R. HAYNES

A Study of Bird Song. Edward A. Armstrong. Dover Publications, Inc., New York. 1973. xv+343 p., 43 figs. \$4.00.

This is a paperback reprinting of a book originally published in 1963; it is identical to the original edition, except for a 1-page preface to this edition by the author and a 7-page Addendum containing notes (arranged under 11 major topics) on more recent information.

This book, one of the very few books on bird song that cover the subject in a comprehensive fashion, is based on studies with modern electronic equipment. The chapter headings indicate the scope of the book: "Bird Utterances as Language"; "The Structure and Components of Bird Song"; "The Development and Learning of Song"; "Subsong"; "Vocal Mimicry"; "Song Dialects and the Relation of Vocalization to Speciation"; "Territorial Song and Related Forms of Song"; "Song-flight and Non-vocal Song"; "Song and the Annual Cycle"; "Female Song, Duetting, and Corporate Song"; "The Influence of Light, Weather, and Temperature on Song"; "Song and Adaptations to Habitat"; and "Bird Song as Art and Play." There is an 11-page appendix on "Acoustic Communication in the Animal Kingdom and the Organs Involved," two sections of Addenda (the first from the original edition), a bibliography of some 1100 references (the vast majority only through 1960, but a few in the Addenda as late as 1972), and four indexes (birds, other organisms, authorities, and general). The subjects discussed are illustrated by examples of birds from all over the world, about one-fourth of them from North America. The scope of this book, together with its very extensive bibliography, makes it a very important reference, not only for students of bird song, but for anyone interested in animal behavior.

DONALD J. BORROR